

**IN THE CLAIMS**

Please amend the claims as follows:

1. (Currently amended) A method of forming a semiconductor structure comprising:
  - etching through a nitride layer;
  - etching through an oxide layer; and
  - etching a semiconductor substrate; wherein:
    - a last portion of the nitride layer is etched with a nitride etching chemistry comprising a fluorinated hydrocarbon, oxygen, and an inert gas selected from the group consisting of neon, argon, krypton, xenon, and combinations thereof;
    - a last portion of the oxide layer is etched with an oxide etching chemistry that is different from the nitride etching chemistry, and the oxide etching chemistry comprises  $\text{CF}_4$  and  $\text{CHF}_3$ ; and
    - the nitride layer is on the oxide layer, and the oxide layer is on the semiconductor substrate.
2. (Original) The method of claim 1 wherein an antireflective coating is on the nitride layer, and wherein the method further comprises etching the antireflective coating using the nitride etching chemistry.
3. (Currently amended) The method of claim 1 further comprising overetching the nitride layer using the nitride etching chemistry by up to and including ten percent of ~~the nitride end point~~.
4. (Original) The method of claim 1 wherein the fluorinated hydrocarbon is selected from the group consisting of  $\text{CF}_4$ ,  $\text{CHF}_3$ ,  $\text{CH}_2\text{F}_2$ ,  $\text{CH}_3\text{F}$ , and combinations thereof.

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5. (Original) The method of claim 1 wherein the oxide etching chemistry comprises a fluorinated hydrocarbon selected from the group consisting of  $\text{CF}_4$ ,  $\text{CHF}_3$ ,  $\text{CH}_2\text{F}_2$ ,  $\text{CH}_3\text{F}$ , and combinations thereof.

6. (Original) The method of claim 5 wherein the semiconductor substrate comprises silicon, and wherein the etching of the semiconductor substrate is achieved with a silicon etching chemistry comprising a reagent selected from the group consisting of a halogen gas, a hydrogen halide, oxygen, and combinations thereof.

7. (Canceled)

8. (Original) The method of claim 7 wherein a ratio of  $\text{CF}_4$  flow rate to  $\text{CHF}_3$  flow rate ranges from one to one up to and including one to six.

9. (Original) The method of claim 6 wherein the silicon etching chemistry comprises  $\text{Cl}_2$ ,  $\text{HBr}$ , and  $\text{O}_2$ .

10. (Original) The method of claim 1 wherein the nitride etching chemistry comprises  $\text{CF}_4$ ,  $\text{CHF}_3$ ,  $\text{Ar}$ , and  $\text{O}_2$ .

11. (Original) The method of claim 10 wherein a ratio of  $\text{CF}_4$  flow rate to  $\text{CHF}_3$  flow rate varies from six to one down to and including one to one.

12. (Original) The method of claim 1 wherein the nitride etching chemistry is introduced with a bias of at least -50 V.

13. (Original) The method of claim 1 wherein a ratio of pressure:top power:bias of the nitride etching chemistry is 1-50 mTorr: 100-750 W: -50 - -500 V.

14. (Original) The method of claim 10 wherein a ratio of pressure:top power:bias of the nitride etching chemistry is 1-50 mTorr: 100-750 W:-50 - -500 V.

15. (Original) The method of claim 7 wherein a ratio of  $\text{CF}_4$  flow rate: $\text{CHF}_3$  flow rate is 1-500 sccm:5-500 sccm.

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16. (Original) The method of claim 6 further comprising cleaning the semiconductor substrate with a silicon cleaning chemistry comprising a fluorinated hydrocarbon and an inert gas selected from the group consisting of neon, argon, krypton, xenon, and combinations thereof.

17. (Original) The method of claim 6 further comprising cleaning the semiconductor substrate using a silicon cleaning chemistry comprising  $\text{CF}_4$  and argon.

18. (Currently amended) The method of claim 236 wherein the silicon cleaning chemistry is introduced with a bias of at least -50 V.

19. (Currently amended) A method of forming a semiconductor structure comprising:

- etching through a nitride layer;
- etching through an oxide layer; and
- etching a semiconductor substrate, which comprises silicon; wherein:
  - a last portion of the nitride layer is etched with a nitride etching chemistry comprising  $\text{CF}_4$ ,  $\text{CHF}_3$ , Ar, and  $\text{O}_2$ ;
  - a last portion of the oxide layer is etched with an oxide etching chemistry that is different from the nitride etching chemistry, and the oxide etching chemistry comprises ~~comprising~~  $\text{CF}_4$  and  $\text{CHF}_3$ ;
  - the semiconductor substrate is etched with a silicon etching chemistry comprising  $\text{Cl}_2$ , HBr, and  $\text{O}_2$ ; and
  - the nitride layer is on the oxide layer, and the oxide layer is on the semiconductor substrate.

20. (Original) A method of making a semiconductor device comprising:

- making a semiconductor structure by the method of claim 1; and
- forming a semiconductor device from the structure.

21. (Original) A method of making an electronic device comprising:

- making a semiconductor device by the method of claim 20; and
- forming an electronic device, which comprises the semiconductor device.

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22. (Original) A method of making a semiconductor device comprising:  
making a semiconductor structure by the method of claim 19;  
and  
forming a semiconductor device from the structure.
23. (Original) A method of making an electronic device comprising:  
making a semiconductor device by the method of claim 22; and  
forming an electronic device, which comprises the semiconductor device.
- 24 - 30. (Canceled)

31. (New) A method of forming a semiconductor structure comprising:  
etching through a nitride layer;  
etching through an oxide layer;  
etching a semiconductor substrate; wherein:  
a last portion of the nitride layer is etched with a nitride etching chemistry comprising a fluorinated hydrocarbon, oxygen, and an inert gas selected from the group consisting of neon, argon, krypton, xenon, and combinations thereof;  
a last portion of the oxide layer is etched with an oxide etching chemistry that is different from the nitride etching chemistry; and  
the nitride layer is on the oxide layer, and the oxide layer is on the semiconductor substrate; and  
overetching the nitride layer using the nitride etching chemistry by up to and including ten percent.

32. (New) The method of claim 31 wherein an antireflective coating is on the nitride layer, and wherein the method further comprises etching the antireflective coating using the nitride etching chemistry.

33. (New) The method of claim 31 wherein the fluorinated hydrocarbon is selected from the group consisting of  $\text{CF}_4$ ,  $\text{CHF}_3$ ,  $\text{CH}_2\text{F}_2$ ,  $\text{CH}_3\text{F}$ , and combinations thereof.

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34. (New) The method of claim 31 wherein the oxide etching chemistry comprises a fluorinated hydrocarbon selected from the group consisting of  $\text{CF}_4$ ,  $\text{CHF}_3$ ,  $\text{CH}_2\text{F}_2$ ,  $\text{CH}_3\text{F}$ , and combinations thereof.

35. (New) The method of claim 34 wherein the semiconductor substrate comprises silicon, and wherein the etching of the semiconductor substrate is achieved with a silicon etching chemistry comprising a reagent selected from the group consisting of a halogen gas, a hydrogen halide, oxygen, and combinations thereof.

36. (New) The method of claim 31, wherein the oxide etching chemistry comprises  $\text{CF}_4$  and  $\text{CHF}_3$ .

37. (New) The method of claim 36 wherein a ratio of  $\text{CF}_4$  flow rate to  $\text{CHF}_3$  flow rate ranges from one to one up to and including one to six.

38. (New) The method of claim 35 wherein the silicon etching chemistry comprises  $\text{Cl}_2$ ,  $\text{HBr}$ , and  $\text{O}_2$ .